

EXHIBIT 39

1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF CALIFORNIA
3 SAN JOSE DIVISION

4
5 CISCO SYSTEMS, INC. Case No.: 5:14-cv-05344-BLF (PSG)

6 Plaintiff,

7 v.

8 ARISTA NETWORKS, INC.

9 Defendants.

10
11
12 * HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY *

13 VIDEOTAPED DEPOSITION OF KIRK LOUGHEED

14 Palo Alto, California

15 Monday, April 4, 2016

16 Volume 2

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18
19
20 Reported by:

21 LESLIE JOHNSON

22 RPR, CSR No. 11451

23 Job No.: 2285024

24 PAGES 190 - 399

1 Q. From the first page of Exhibit 467, do you
2 have any reason to doubt that this is an IEEE
3 standard?

4 MR. NEUKOM: Objection. Vague. Calls for
5 opinion testimony. And lack of foundation.

6 THE WITNESS: I'm willing to accept the
7 assertion that it's an IEEE standard.

8 BY MR. WONG:

9 Q. Had you ever reviewed the ANSI/IEEE
10 standard 802.1D 1998 edition?

11 A. I have never reviewed the 1998 edition of
12 IEEE 802.1D.

13 Q. Have you ever reviewed any other editions
14 of 802.1D?

15 A. A much earlier version.

16 Q. In that much earlier -- you can set that
17 down, Mr. Lougheed.

18 In that earlier version of 802.1D, do you
19 recall whether the standard used the term "spanning
20 tree"?

21 MR. NEUKOM: Objection. Vague. I'm
22 pretty sure if that document uses the word
23 "standard" the way the document before uses the word
24 "standard," the document presupposes a
25 mischaracterization of the document.

1 BY MR. WONG:

2 Q. Please answer.

3 A. What's your question again?

4 Q. Sure. In the earlier version of the
5 802.1D standard that you have reviewed -- strike
6 that.

7 You just testified that you had reviewed
8 an earlier version of the 802.1D standard earlier
9 than the 1998 edition, right?

10 A. Right.

11 Q. And do you recall approximately what year
12 that version of the 802.1D standard was?

13 A. Not the year. The year I would have
14 reviewed something like that would have been '87 or
15 '88.

16 Q. And in your review of that version of the
17 802.1D standard that you would have reviewed in 1987
18 or '88, do you recall whether the word "spanning
19 tree" existed in that document?

20 A. No, I don't recall if that word appeared
21 there.

22 Q. But when you came up with the "show
23 spanning-tree" command for Cisco IOS, had you heard
24 of the term "spanning tree" before that?

25 A. Yes, I had.

1 Q. And why did you choose to put a hyphen
2 between the words "spanning" and "tree"?

3 A. Because I like English phrases and I like
4 separating them with dashes.

5 Q. Why did you --

6 A. And I saw -- go ahead.

7 Q. No, no. I interrupted you, Mr. Lougheed.
8 Go ahead.

9 A. And I had no concept or no belief at the
10 time that I would need to turn that into a
11 hierarchy.

12 Q. And when you say -- refer to a need to
13 turn it into a hierarchy, are you referring to the
14 option of using a space instead of a hyphen in
15 between the word "spanning" and "tree"?

16 A. Yes.

17 Q. How long did it take for you to come up
18 with the command "show spanning-tree," the syntax?

19 A. The syntax? Once I had the protocol
20 working, wouldn't have been very long.

21 Q. Matter of minutes?

22 A. Less than a day.

23 Q. Do you think the command "show
24 spanning-tree" is creative?

25 A. I don't understand.

1 MR. NEUKOM: Objection. Calls for opinion
2 testimony.

3 THE WITNESS: I don't understand what you
4 mean by the word "creative."

5 BY MR. WONG:

6 Q. Do you believe that it took any degree of
7 creativity to come up with the command "show
8 spanning-tree"?

9 MR. NEUKOM: Same objection. Calls for
10 opinion testimony. Also calls for a legal
11 conclusion.

12 But notwithstanding my objections, you
13 should still try to answer these questions to the
14 best of your ability.

15 THE WITNESS: And the question is?

16 BY MR. WONG:

17 Q. Do you believe that it took any creativity
18 to come up with the command "show spanning-tree"?

19 A. I do believe that it shows a degree of
20 creativity.

21 Q. And describe -- go ahead.

22 A. I mean --

23 Q. Were you done with your answer?

24 A. Yes.

25 Q. And what is creative about the command

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1 "show spanning-tree"?

2 MR. NEUKOM: Objection. Calls for a legal
3 conclusion and calls for opinion testimony.

4 THE WITNESS: And I just -- I'm not sure
5 what the hell you mean by "creative."

6 BY MR. WONG:

7 Q. Have you -- do you know what the word
8 "creative" means?

9 What do you understand the word "creative"
10 to mean? The question is, what do you understand
11 the word "creative" to mean?

12 MR. NEUKOM: Objection to form.

13 THE WITNESS: It's the ability to create
14 things. And I was creating a command expression to
15 monitor a piece of complex software.

16 What do you mean by "creative"?

17 BY MR. WONG:

18 Q. I'm going to use your definition of
19 creative here, Mr. Lougheed. Under your definition
20 of "creative," what's creative about the "show
21 spanning-tree" command?

22 MR. NEUKOM: Objection. Calls for opinion
23 testimony and calls for a legal conclusion.

24 THE WITNESS: Writing any piece of
25 software involves some degree of creativity. It may

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1 not be at the Shakespearean level, but maybe more
2 prosaic. But you actually have to figure out
3 something. You have to create something to show how
4 stuff is done or to create something to communicate.
5 And that's what I was doing was creating something
6 to communicate to the customer, to the user of the
7 stuff, here is a command expression that will get
8 you information, and it's easy enough to understand
9 what was being done.

10 MR. NEUKOM: I think we've now been going
11 for about an hour, 15 minutes, thereabouts. Should
12 we take a short break.

13 MR. WONG: I only have one more command
14 and we can wrap up this volume. It could be fast.
15 Can you do another . . .

16 MR. NEUKOM: Just from looking at
17 Mr. Lougheed, he looks to me like a man who could
18 use five minutes of sunshine.

19 MR. WONG: I'll leave it up to you,
20 Mr. Lougheed, but in terms of these command-specific
21 questions, I only have one more.

22 THE WITNESS: I'd like to take a break.

23 MR. WONG: Okay. Sure.

24 MR. NEUKOM: Just for a little bit.

25 MR. WONG: Sure.

1 THE VIDEOGRAPHER: Going off the record.

2 The time is 2:35 p.m.

3 (A recess was taken.)

4 THE VIDEOGRAPHER: Back on the record.

5 The time is 2:51 p.m.

6 BY MR. WONG:

7 Q. Mr. Lougheed, are you the
8 author/originator of the "timers bgp" command?

9 A. Yes, I am.

10 Q. How do you know that you are the
11 originator of the "timers bgp" command?

12 A. Because I remember creating the command.
13 I created the original BGP support.

14 Q. If you look at Exhibit -- well, before we
15 do that, do you know approximately when you came up
16 with the "timers bgp" command?

17 A. It would be sometime in 1989.

18 Q. Okay. If you look at Exhibit 464,
19 page 42. Let me know when you're there.

20 A. Yep.

21 Q. You see fourth from the bottom in the
22 table, there's the "timers bgp" command shown there?

23 A. Uh-huh.

24 Q. And the date of earliest known document
25 for the "timers bgp" command in Exhibit 464 says

1 1993.

2 Do you see that?

3 A. Yes.

4 Q. So is it your recollection sitting here
5 today that you actually came up with the command
6 syntax for "timers bgp" in the 1980s?

7 A. Yes.

8 Q. And did you come up with all of the BGP --
9 strike that.

10 At least for the BGP commands that you
11 came up with, did you create all of those commands
12 in the 1989 time period?

13 MR. NEUKOM: Objection. Vague and
14 compound.

15 THE WITNESS: I was the only person
16 working on BGP during 1989.

17 BY MR. WONG:

18 Q. What function does the "timers bgp"
19 command perform?

20 A. It allows the customer to tune the various
21 fundamental timers of the protocol, such as sending
22 keep alives and similar such timers.

23 Q. What is a keep alive?

24 A. A keep alive is a common terminology to
25 refer to the -- sending a packet or a probe or a

1 pulse to the other side of a connection to see if
2 the other side is still alive and responding
3 appropriately.

4 Q. And when you say "keep alive" is a common
5 terminology, was it common at the time that you
6 created the "timers bgp" command?

7 A. Well, I used it for other similar
8 activity.

9 Q. Now, you've testified that you were the
10 only person at Cisco working on BGP in 1989,
11 correct?

12 A. That's --

13 Q. How are you sure that this particular
14 command, the "timers bgp" command, was created in
15 1989?

16 A. The "timers" command is a subcommand of
17 the "router" commands or routing protocol or
18 "router" command, and it was originally implemented
19 for things like IGRP and RIP and the like to adjust
20 their sets of fundamental timers. And it would have
21 been -- to the best of my recollection, I
22 implemented that "timers" command early on. Others
23 may have come upon -- come subsequently and added it
24 or refined the parameters to that command, but the
25 original form I -- is mine.

1 Q. And actually, if you look on that same
2 page, page 42 of Exhibit 464, the command right
3 above it is "timers basic (RIP)."

4 Do you see that?

5 A. Uh-huh.

6 Q. And you are also the originator of that
7 command, correct?

8 A. Yes.

9 Q. And the date of earliest known document
10 for that command is September 14th, 1989.

11 Do you see that?

12 A. Uh-huh.

13 Q. Is that -- strike that.

14 Did you work on different "timers"
15 commands at the -- roughly the same time period for
16 Cisco IOS?

17 MR. NEUKOM: Objection. Vague and
18 compound.

19 BY MR. WONG:

20 Q. Let me ask specifically, actually, about
21 these.

22 Did you work on the "timers basic" command
23 and the "timers bgp" command at the same time?

24 A. I don't know if it was the same time, but
25 it was certainly in the late '80s.

1 BY MR. WONG:

2 Q. You can set that aside.

3 Mr. Lougheed, after your first deposition,
4 Cisco identified you a few days later as the creator
5 of the command modes and prompts at issue in this
6 litigation. Are you aware of that?

7 A. Yes.

8 Q. Are you the creator of the command modes
9 and prompts at issue in this litigation?

10 MR. NEUKOM: Objection. Compound.

11 BY MR. WONG:

12 Q. Let me go one by one then, Mr. Lougheed.

13 A. Okay.

14 Q. Are you familiar with the "user exec"
15 command mode?

16 A. In what piece of software?

17 Q. Cisco IOS.

18 A. Yes.

19 Q. And what is the "user exec" command mode
20 in Cisco IOS?

21 A. It's the set of interactive commands for
22 maintaining and monitoring the software.

23 Q. And did you create the "user exec" command
24 mode in Cisco IOS?

25 A. I created many of the commands and the

1 hierarchy of commands that are used in that command
2 mode.

3 Q. Okay. Well, my question is, did you
4 create the "user exec" command mode in Cisco IOS?

5 MR. NEUKOM: Objection. Asked and
6 answered.

7 THE WITNESS: I'm sorry. The question
8 again is?

9 BY MR. WONG:

10 Q. Did you create the "user exec" command
11 mode in Cisco IOS?

12 MR. NEUKOM: Objection. Asked and
13 answered.

14 THE WITNESS: I was the person responsible
15 for the look and feel of the "exec" command mode.

16 BY MR. WONG:

17 Q. But when you say "exec" command mode, is
18 that the same thing as the "user exec" command mode?

19 A. Yes. I think we're talking about the same
20 thing.

21 Q. I think we are too.

22 Is there a "privilege exec" command mode
23 in Cisco IOS?

24 A. Yes.

25 Q. And what is the difference between the

1 "privilege exec" command mode in Cisco IOS and the
2 "user exec" command mode in Cisco IOS?
3 A. The one is a subset of the other.
4 Q. Which one is a subset of the other?
5 A. The "user" command mode.
6 Q. And are you the creator of the "privilege
7 exec" command mode in Cisco IOS?
8 A. I base that ultimately on Mr. Yaeger's
9 work.
10 Q. Is that the end of your answer?
11 A. Yes.
12 Q. I just wanted to make sure that you
13 weren't going to say something else.
14 A. Okay.
15 Q. Is there a "global configuration" command
16 mode in Cisco IOS?
17 A. Yes.
18 Q. What is the "global configuration" command
19 mode in Cisco IOS?
20 A. It's a set of configuration commands that
21 apply to the entire box.
22 Q. And did you create the "global
23 configuration" command mode in Cisco IOS?
24 A. Yes.
25 Q. When did you create the "global